

REMARKS/ARGUMENTS

Claims 25-34 have been added. Claims 6, 10, 14-19 and 23 have been cancelled. Claims 4, 7, 11, and 13 have been amended to state that the NH₃ etch selectively etches the organic dielectric layer with respect to the hardmask. This is supported on page 7, lines 5-10, of the application.

The Examiner rejected claims 4, 13, and 16 under 35 U.S.C. 102, as being anticipated by Ye et al. (US Patent No. 6,080,529).

Claims 4 and 13 have been amended to recite that the etching of the organic dielectric selectively etches the organic dielectric layer with respect to the hardmask. Ye in col. 11, lines 29-65, describe that a silicon dioxide layer 222 is used as a hardmask for etching a layer of organic masking material 220. Ye in col. 12, lines 29-32, teaches that a hydrogen/nitrogen based plasma may be used to etch the silicon dioxide layer 222. Therefore, Ye fails to teach a method using an NH₃ etchant to selectively etch an organic low-k dielectric layer with respect to a hardmask layer, as recited in claims 4 and 13, as amended. For at least these reasons, claims 4 and 13, as amended, are not anticipated by Ye.

Claim 16 has been cancelled.

The Examiner rejected claims 5-7, and 14-15 under 35 U.S.C. 103(a), as being unpatentable over by Ye et al. (US Patent No. 6,080,529) in view of Ding et al. (US 5,814,563). The Examiner further rejected claims 8-11 under 35 U.S.C. 103(a), as being unpatentable over by Ye et al. (US Patent No. 6,080,529) in view of Ding et al. (US 5,814,563) and further in view of Ikegami (US 6,355,572).

Claims 5, 7-9, and 11 each depend either directly or indirectly from the independent claims, and are therefore respectfully submitted to be patentable over the art of record for at least the reasons set forth above with respect to independent claims. Additionally, these dependent claims require additional elements that when taken in the context of the claimed invention, further patentably distinguish the art of record.

For example, claim 5 further recites providing CH₃F while providing the etchant gas comprising NH₃. The Examiner cites col. 10, lines 26-27, of Ding as teaching this. Col. 10,